

**Q-Lab Corporation**  
800 Canterbury Road  
Westlake, Ohio 44145 USA  
Tel: +1-440-835-8700  
Fax: +1-440-835-8738  
www.q-lab.com



## **Introduction to Weathering (W101) Seminar**

Wednesday 5th October 2022 at Q-Lab Headquarters Office

8:00 – 8:30am EDT	Registration with Coffee, Pastries, Snacks & Refreshments
8:30 – 8:45am	Introductions
<b>8:45 – 10:15am</b>	<b>Part 1: Forces of Weathering</b> <ul style="list-style-type: none"><li>• Sunlight: spectral irradiance and material sensitivity</li><li>• Heat: temperature and thermal cycling</li><li>• Water: relative humidity, dew, and rainfall</li></ul>
10:15 – 10:25am	Q&A
10:25 – 10:40am	Coffee Break
<b>10:40 – 11:50am</b>	<b>Part 2: Outdoor Weathering</b> <ul style="list-style-type: none"><li>• Benchmark outdoor test locations: Florida &amp; Arizona</li><li>• Natural outdoor weathering testing</li><li>• Black box, interior automotive material, and behind-glass exposures</li><li>• Natural sunlight concentrators</li></ul>
11:50 – 12:00pm	Q&A
12:00 – 12:45pm	Lunch/Free Time
<b>12:45 – 2:00pm</b>	<b>Part 3: Accelerated Laboratory Weathering</b> <ul style="list-style-type: none"><li>• Xenon Arc<ul style="list-style-type: none"><li>o Light delivery: Xenon arc lamps, optical filters, and irradiance control</li><li>o Environment simulation: black panel, chamber air, humidity, water spray</li></ul></li><li>• Fluorescent UV Weathering<ul style="list-style-type: none"><li>o Light delivery: fluorescent UV choice of lamps and irradiance control</li><li>o Environment simulation: black panel, condensation</li></ul></li></ul>
2:00 – 2:10pm	Q&A
2:10 – 2:25pm	Coffee Break
<b>2:25 – 3:30pm</b>	<b>Part 4: Developing Weathering Testing Programs</b> <ul style="list-style-type: none"><li>• Why Test?</li><li>• Factors affecting correlation between natural and accelerated weathering</li><li>• Fluorescent UV and xenon-arc comparison</li><li>• Weathering test program development</li><li>• Weathering case studies</li></ul>
3:30 – 3:40pm	Q&A
3:40 – 4:30pm	Summary & Conclusions
<b>4:30 - 5:00pm</b>	<b>Q-Lab Facility tour and questions</b>